

Sondertermin

Am Donnerstag, dem **14. August 2008** um **14:00** Uhr hält

Prof. Dr. Hyungsuck Cho
Korea Advanced Institute of Science and Technology

einen Vortrag mit dem Titel

Towards Achieving Vision System Intelligence

Der Vortrag findet im OFFIS, Escherweg 2, Konferenzraum F02 statt.

Zusammenfassung:

Due to the steady growth of the machine vision market over the past decade the advancements of machine vision technology is tremendous, in almost all parts of machine vision systems which include optics, frame grabber, image detector, connecting bus, processing unit and illumination.

Along with these developments mentioned above, image capturing, processing and understanding have been also made significant progress in recent years. However, still, considerable effort must be made to meet the challenging goal "Capture image within region of interest with desirable precision accuracy, although this has long been issue of ultimate importance as quality of the acquired raw image directly affects subsequent image processing and understanding. This is because there still remain significant problems to be solved such as small depth of field arising from optical diffraction limit defocus and various aberration phenomena, inability to change imaging views with a fixed-positioned image detector according to desirable observation angle and limited image resolution.

This talk will put focus on how to enhance imaging quality and to capture image with variable view imaging capability. The research effort here is to use the concept of optomechatronic technology whose underlying principle lies in integration of optics, mechanical and electrical signals to increase adaptability in response to the need of imaging requirement, thereby achieving intelligence of vision system to a certain degree.

The resulting outcomes are promising in the sense that depth of field otherwise remained fixed, can be made extendable to desirable degree, view angle can be changed adaptively according to change in the given scene situation, resolution can be increased to a certain extend and image intensity saturation due to reflecting object surfaces within in the scene can be removed, that enables to obtain the image with non-saturated intensity. Methodologies relevant to these developments will be introduced and discussed in some details based on KAIST research efforts made recently.

Eingeladen von: Prof. Dr.-Ing. Sergej Fatikow

Weitere Kolloquiumstermine sind im WWW abrufbar.